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EXAMINER

HSIEH, SHIH WEN

ART UNIT PAPER NUMBER

2861

DATE MAILED: 07/10/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/820,427

Applicant(s)

NELSON ET AL.

Examiner

Shih-wen Hsieh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 March 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10-21 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

Page 12, lines 23, 25 and 30, film 48 is not indicated in fig. 9 and fig. 10 respectively, please indicate which portion is 48 in those two figures.

Page 13, last line, should "28" be "55" as shown in fig. 11. Because Numeral "28" is designated as print cartridge and where in fig. 11, the place where numeral "28" was indicated is the hot-melt seal.

Claim Objections

2. Claim 14 is objected to because of the following informalities:

The recited "pouch material" in line 17 is not recited in claim 6 to which this claim depends on. "Pouch material" are recited in claims 11 and 13. Recommend changing the dependency of claim 14 to either claim 11 or 13.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 6 is rejected under 35 U.S.C. 102(b) as being anticipated by Carlotta (US Pat. No. 5,400,060).

In regard to:

Claim 6:

Carlotta teaches:

A print cartridge with sealed nozzles and process of sealing the nozzles, comprising:
a print cartridge (10, fig. 4) having nozzles (26, fig. 1) through which ink is jetted;
and
a hot-melt layer (32, figs. 2 and 3) adhesively bonded to the print cartridge and sealing the nozzles, refer to col. 2, lines 31-43; col. 3, lines 42-52.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-3, 5, 7, 10-13, 15 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carlotta (US Pat. No. 5,400,060).

In regard to:

Claims 1, 5 and 15 (process):

Carlotta teaches:

A laminate (28, figs. 2 and 3) for sealing nozzles on print cartridges and process in sealing the cartridge, comprising:

a non-woven thin base film having crevices therein, refer to col.3, lines 42-46;

a hot-melt layer adhesively (32, figs. 2 and 3) bonded thereto, the laminate seals the print cartridge nozzles prior to use, refer to col. 2, lines 31-43; col. 3, lines 42-52.

Carlotta further teaches the laminated seal (28) having a layer (30, figs. 2 and 3) on top of the low temperature melt layer (32), the layer (30) is made of plastic material,

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refer to col. 3, lines 42-44. The device of Carlotta DIFFERS from claims 1, 5 and 15 in that it does not teach:

a moisture retardant base film.

Therefore it would have been an obvious matter to understand that the plastic material as taught by Carlotta is a moisture retardant material. Because the nature of plastic is not allowing moisture to infiltrate through.

Further for the process claim, please refer to fig. 4 and col. 4, line 3+, for making the seal, cutting the seal and heating the seal.

Claim 2:

The device of Carlotta DIFFERS from claim 2 in that it does not teach:

wherein the base film is a polyolefin.

Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to select a known material available to the general public, since it has been held to be within the general skill of a worker in the art to select a known material such as polyolefin which is known as a product of Porex company on the basis of its suitability for the intended use for the purpose of using its plastic nature that in one respect is moisture retardant, refer to MPEP 2144.07.

Claim 3:

Carlotta further teaches:

wherein the base film is a polyester, refer to col. 3, lines 42-44.

Claim 7:

Carlotta further teaches:

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wherein the print cartridge contains ink; the nozzles (26, fig. 1) are contained in an orifice plate (18, fig. 1) on the print cartridge; and the hot-melt prevents ink from escaping from the print cartridge, prevents ink from attacking materials around the orifice plate.

Carlotta further teaches the laminated seal (28) having a layer (30, figs. 2 and 3) on top of the low temperature melt layer (32), the layer (30) is made of plastic material, refer to col. 3, lines 42-44. The device of Carlotta DIFFERS from claim 7 in that it does not teach:

the seal also has a moisture barrier against corrosion.

Therefore it would have been an obvious matter to understand that the plastic material as taught by Carlotta is part of the seal and is a moisture retardant material because of the nature of plastic is not allowing moisture to infiltrate through.

Claim 10:

Carlotta further teaches the laminated seal (28) having a layer (30, figs. 2 and 3) on top of the low temperature melt layer (32), the layer (30) is made of plastic material, refer to col. 3, lines 42-44. The device of Carlotta DIFFERS from claim 7 in that it does not teach:

wherein the hot-melt layer (32) is laminated with a moisture retardant base film.

Therefore it would have been an obvious matter to understand that the layer (31) made of plastic material laminated with the hot-melt layer (32) as taught by Carlotta is a moisture retardant material because of the nature of plastic is not allowing moisture to infiltrate through.

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Claims 11-13 and 19 (process):

The device of Carlotta DIFFERS from claims 11-13 and 19 in that it does not teach:

wherein the hot-melt is heat staked to a moisture retardant pouch material.

wherein the hot-melt is heat staked to a cardboard sleeve.

wherein the hot-melt is block coated on heat stakable pouch material.

Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to select a known material available to the general public, since it has been held to be within the general skill of a worker in the art to select a known material such as pouch material or cardboard sleeve on the basis of its suitability for the intended use for the purpose of their easy acquisition and discarded after peel-off from the ink cartridge, refer to MPEP 2144.07.

7. Claims 4, 8, 14, 16 (process), 17 (process), 20 (process) and 21 (process) are rejected under 35 U.S.C. 103(a) as being unpatentable over Carlotta in view of Karita et al. (US Pat. No. 5,850,238).

In regard to:

Claims 4, 8 and 17:

The device of Carlotta DIFFERS from claims 4, 8 and 17 in that it does not teach:

wherein the laminate additionally seals electrical contacts and leads on print cartridges against corrosion (claim 4).

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wherein the print cartridge has electrical contacts and leads mounted thereon which are also sealed by the hot-melt (claim 8) and process of using the cut tape to seal the electric contact and leads.

Karita et al. teach a print head is sealed by a sealing member (3, fig. 18) that seals not only ejection outlets but also protects electric contacts (201, fig. 18) of the print head and the process of sealing the electric contacts and leads, refer to col. 15, lines 23-45.

Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the device of Carlotta to extend Carlotta's laminated seal to also seal the electric contacts as taught by Karita et al. for the purpose of protecting the electric contacts.

Claims 14 and 16:

Carlotta teaches a laminated seal with a hot-melt layer (32) as a layer of the laminate. Carlotta also teaches the laminate has a free end, refer to fig. 2.

The device of Carlotta DIFFERS from claim 14 in that it does not teach:

the pouch material is wrapped around the print cartridge and process of wrapping the pouch material around the print cartridge.

Karita et al. teach a sealing sheet (3) wrapping around an ink cartridge and the process of wrapping, refer to figs. 13, 14 and 18.

Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the device of Carlotta to wrap the seal

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around the ink cartridge as taught by Karita et al. for the purpose of allowing the seal to seal the nozzles and also the vent hole of the cartridge or to seal the electric contacts.

Claims 20 and 21:

Carlotta teaches:

A process for sealing a print cartridge having nozzles that jet ink, comprising;

block coating heat stakable material with hotmelt;

positioning the pouch material over the nozzles;

heat staking the block coated hot-melt to the nozzles, refer to fig. 4, and col. 4,

line 3+.

The device of Carlotta DIFFERS from claim 20 in that it does not teach:

the heat stakable material is a pouch material.

Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to select a known material available to the general public, since it has been held to be within the general skill of a worker in the art to select a known material such as pouch material on the basis of its suitability for the intended use for the purpose of their easy acquisition and discarded after peel-off from the ink cartridge, refer to MPEP 2144.07.

The modified device of Carlotta further DIFFERS from claim 20 in that it does not teach a process of:

flow wrapping the pouch material around the print cartridge.

Karita et al. teaches a process of wrapping a seal sheet around a print cartridge.

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Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the device of Carlotta to wrap the laminated seal around the cartridge as taught by Karita et al. for the purpose of seal not only the nozzles but also the vent hole or the electric contacts.

Allowable Subject Matter

8. Claims 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter:

Prior art fail to teach the hot-melt layer is adhesively bonded to a film having an adhesion with the hot-melt layer that is greater than the adhesion between the hot-melt layer and the print cartridge in the combination as claimed.

US 5,400,060, "thermal ink jet cartridge face sealing for shipping" issued to Carlotta, 3/95 teaches a removable seal having two layers, one layer has a low melting temperature and is to apply to face of ink jet cartridge, the other layer is made of a material such as plastic and has a higher melting temperature. However, the melting temperature of those two layers has no relationship to the strength of their adhesion capabilities.

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10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shih-wen Hsieh whose telephone number is 703-305-4961. The examiner can normally be reached on 7:30AM -5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J. Hilton can be reached on 703-308-0719. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3431/3432 and 703-308-7382/7722/7724 for regular communications and 703-308-5841 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.


Shih-wen Hsieh
Examiner
Art Unit 2861

SWH



July 9, 2002